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| 10/657,250      | 09/09/2003  | Jaap Herman van't Hoff | 7913-038-999        | 4047             |

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| EXAMINER |
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RIVELL, JOHN A

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| ART UNIT | PAPER NUMBER |
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3753

DATE MAILED: 10/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |  |  |
|------------------------------|--------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/657,250 | <b>Applicant(s)</b><br>VAN'T HOFF, JAAP HERMAN |  |
|                              | <b>Examiner</b><br>John Rivell       | <b>Art Unit</b><br>3753                        |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 8/11/06 (RCE).
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 11-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 11, 2006 has been entered.

The amendment filed August 8, 2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "Circumferential recess 22 has a trapezoidal cross-sectional shape in which two opposite sides (e.g., the two shortest sides) are not parallel."

The specification as originally filed, as well as the parental applications in their entirety, fails to set forth with any written specificity any shape of "recess 22". Additionally, there is no written disclosure or discussion of shape having "two opposite sides (which) are not parallel" as is proposed in the amendment.

In support for this addition to the specification applicant argues that:

"Support for these amendments is found, for example, in Fig. 1 of the application, where circumferential recess 22 is shown as having a cross-sectional shape in the form of a trapezoid, where two opposite sides of the trapezoid (e.g., the shortest two sides) are not parallel."

On close inspection of the drawings as filed, this statement is speculative at best. There is no clear perception of a "trapezoidal" shape to the disclosed recess 22.

Applicant is required to cancel the new matter in the reply to this Office Action.

In the event the drawings are determined to provide adequate support for the "trapezoidal" shape as is now claimed, the drawings would be objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "trapezoidal" shape having "two opposite sides not parallel to each other" as recited in claims 12 and 26 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) would be required in reply to the Office action to avoid abandonment of the application provided the drawings as originally filed provide support for the invention as is now claimed. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 12 and 26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the application, as originally filed, (as well as in all parental applications) the written specification fails to identify and discuss any structural features and/or criticality of the now claimed "circumferential recess... has a trapezoidal rectangular cross-section" as recited in claim 12 and "wherein two opposite sides of the trapezoidal cross-section are not parallel to one another" as now recited in claim 26. From a thorough review it would appear that these features are new matter.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11, 13, 14, 19, 21 and 25 are rejected under 35 U.S.C. §102 (b) as being anticipated by Alfons U.S. Pat. No. 5,285,931 cited by applicant.

The patent to Alfons discloses, in figures 1-5 for example, a "pressure control device (generally at 3) for maintaining a constant predetermined excess pressure in a fluid dispensing container (1), which device (3) comprises a first chamber (4), a fluid connection (via valve 7, chamber 11 and port 12) between the first chamber (4) and the

container (1), a valve (7) with a closing member (at stem 10) for releasing and closing said fluid connection and a resilient pressure element (gas pressure chamber 5) exerting said predetermined excess pressure onto the closing member in a closing direction, the resilient pressure element comprising a second chamber (5; defined as the entire chamber encompassed by the upper end of container 3 to the upper surface of wall 6) being filled with a gas at the predetermined excess pressure and relative to which the closing member is movable, the first chamber (4) being filled with a gas at a pressure higher than said predetermined excess pressure (in chamber 5), while in use the fluid connection (at valve 7) is released if the fluid pressure in the container (1) drops below the predetermined excess pressure (in chamber 5), so that gas flows from the first chamber (4) to the container (1) and the pressure in the container (1) increases until the fluid connection (at valve 7) is closed again by the closing member as a result of the increased pressure in the container (1 acting on diaphragm 9), wherein the closing member (at valve 7, stem 10 and diaphragm 9) is movable in a reciprocated manner between an upper extreme position (fig. 5; wherein the seal 18 contacts the surface of stem 10 at an upper end of groove 17) and a lower extreme position (fig. 3; wherein the seal 18 contacts the surface of stem 10 at a lower end of groove 17), whereby the fluid connection (at valve 7) is closed, which extreme positions are defined by the width of a circumferential recess (i.e. the axial length distance between the upper position where the seal contacts the surface of stem 10 at the upper end of groove 17 to the lower position where the seal contacts the surface of stem 10 at the lower end of groove 17 defines a "width" of the "recess" claimed) in the valve (stem) and the release

(open) position of the closing member is defined between the upper and lower closing positions” as recited in claim 11.

Regarding claim 13, in Alfons, “at the upper (fig. 5) and lower (fig. 3) extreme positions, a gas seal is formed by contact between a sealing ring (18) and an outer edge of the closing member” at opposing ends of groove 17, as recited.

Regarding claim 14, in Alfons, “the closing member comprises a stem (10) with the circumferential recess (at groove 17)” as recited.

Regarding claim 15, in Alfons, “wherein the fluid connection comprises a first opening (e.g. the opening in the lower surface of wall 6 defining an upper sidewall in the lower chamber 4) in the sidewall (6) of the first chamber, and the second chamber (as defined above) is provided with a second opening (read at the opening in the upper surface of wall 6 which defines the lower surface of the “second chamber”), the closing member (stem 10) extending from the first chamber (4) through the first and second opening (on opposite sides of wall 6) to the second chamber (above wall 6), a first subsurface (the lower surface of stem 10) of the closing member being situated in the first chamber (4) and a second subsurface (the lower surface of diaphragm 9) of the closing member being situated in the second chamber (5 as defined above), the size of the first subsurface (e.g. the end of stem 10 extending within the first chamber 4) is substantially smaller than the size of the second subsurface (the lower surface of diaphragm 9 spanning chamber 5), such that the gas pressure in the first chamber (4) results in that the force on the first subsurface (the end of the stem 10 extending within and therefore subject to fluid pressure within first chamber 4) is smaller than the force

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on the second subsurface (the lower surface of diaphragm 9) resulting from the predetermined excess pressure (within chamber 5), while the first opening is released or closed by the closing member (stem 10) depending on the position of the closing member (10) relative to the second chamber” as recited.

Regarding claim 19, in Alfons, “the second chamber (5) is located outside the first chamber (4)” as recited.

Regarding claim 20, in Alfons, “the closing member (at valve 7) is located substantially outside the first chamber (4)” as recited.

Regarding claim 21, in Alfons, “the volume of the first chamber (4) is substantially greater than the volume of the second chamber (5)” as recited.

Regarding claim 25, in Alfons, “a container (at container 1) is provided with a device according to claim 1” as recited.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12, 16, 17 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alfons or Alfons in view of Cruysbergs (U.S. Pat. No. 5,368,207).

Alfons discloses the claimed invention except for having a “trapezoidal” shaped cross sectional recess in the stem 10, whose “two opposite sides... are not parallel to one another.”

Firstly, regarding claims 12 and 26, it would have been an obvious matter of design choice to employ a “trapezoidal” shaped recess, whose “two opposite sides...

are not parallel to one another" in place of the shape of the "recess" defined between the upper and lower extreme positions of the valve stem of Alfons, since such a modification would have involved a mere change in the shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art. In re Dailey, 357 F.2d 669, 149 USPQ 457 (CCPA 1966).

Secondly, regarding claims 12 and 25, if it were not an obvious matter of design choice relating to shape, the patent to Cruysbergs ('207), in the embodiment of figure 8 for example, discloses that it is known in the art to employ a "trapezoidal" shaped groove 144b (see column 9, lines 34-39) whose "two opposite sides... are not parallel to one another" in the reciprocal valve stem 144 for the purpose of controlling the flow of charging fluid pressure from a "first chamber" 140 to the "second chamber" 152 and ultimately to the interior of container 16 for dispensing of material contained within container 16. As compared to the "shape" of the recess of Alfons, the difference in shapes is seen as a fully mechanical and/or functional equivalent.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Alfons a specifically "trapezoidal" shaped recess whose "two opposite sides... are not parallel to one another" in place of the recess of Alfons for the purpose of controlling the flow of pressurized fluid from the first chamber to ultimately the container so as to allow material dispensing from the container as recognized by Cruysbergs ('207).

Regarding claims 16 and 17, the patent to Alfons discloses all the claimed features with the exception of having a "piston" element. Rather, Alfons employs a diaphragm.

The patent to Cruysbergs ('207) in the embodiment of figure 7 discloses that it is known in the art to employ a piston element at plunger 146 including seals 148 fixed to

the piston for sealing the piston to the cylinder formed by the chamber 136 wall for the purpose of providing a fluid pressure reaction surface on which fluid pressure acts to actuate the valve element at stem 144 controlling fluid pressure flow from the first chamber 140 to the second chamber 152 and ultimately to the container for dispensing of the material within the container 16. In comparison, the diaphragm used in Alfons is not subject to fluid leakage there across yet is susceptible to rupture at higher pressures whereas a piston element, not subject to rupture at higher pressures is subject to leakage across the piston at the seals. On comparison, each of the piston and diaphragm elements is regarded as a full functional equivalent of the other and are not functionally mutually exclusive.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Alfons a piston element, in place of the diaphragm element 9, responsive to fluid pressure differentials there across for the purpose of a fluid pressure reaction surface on which fluid pressure acts to actuate the valve element at stem 10 controlling fluid pressure flow from the first chamber 4 to the second chamber 5 and ultimately to the container at 23 for dispensing of the material within the container 3 as recognized by Cruysbergs ('207).

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory

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double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 18 and 22-24 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No.

6,616,017. Although the conflicting claims are not identical, they are not patentably distinct from each other because all of the claimed features of instant application claims 18 and 22-24 are contained in one, or more, of claims 1-10 of U.S. Patent No. 6,616,017.

### ***Response to Arguments***

Regarding applicants remarks concerning the application of Alfons under 35 USC 102(b), the argument that:

"Claim 11 covers pressure control devices that include a closing member "movable in a reciprocated manner between an upper extreme position and a lower extreme position ... which extreme positions are defined by the width of a circumferential recess in [a] valve." Alfons does not disclose or suggest such devices. Instead, Alfons discloses devices where the cone angle of a peripheral groove defines the extreme positions. For example, in Figs. 3-5 of Alfons, the upper and lower extreme positions are defined by the cone angle of peripheral groove 17. If peripheral groove 17 had a smaller cone angle than the angle shown (for the same width of peripheral groove 17), the upper and lower extreme positions would differ, and rod 10 would have a smaller overall range of travel. In contrast, circumferential recess 22 in Applicant's specification has a trapezoidal cross-sectional shape, and the upper and lower extreme positions in Applicant's pressure control device are determined by a width of the circumferential recess"

is not well taken in view of both the claimed features and the teachings of Alfons.

Firstly, claim 11 fails to recite a specific shape of the "recess". Thus the above argument concerning applicants "trapezoidal" recess is moot.

Secondly, as recited in claim 11, the "extreme positions are defined by the width of a circumferential recess". As noted above regarding Alfons, the "recess" read in Alfons is that "recess" defined between the upper and lower extreme positions, which positions are determined by contact of the respective upper and lower surface of stem 10 within groove 17 with seal 18. While the cone angle of Alfons may further define the location of this intersection of surfaces, and thus may also define the "width" of the "recess", so too may the (now recited "non parallel") sides of the recess of the claimed embodiment also define the extreme positions and thus the "width" of the "recess". Regardless, in applicants claimed embodiment, contact of the upper or left (instant fig. 1) surface of valve stem 24 recess 22 with the seal at 20 defines one "extreme" position. Contact of the lower or right (instant fig. 1) surface of valve stem 24 recess 22 with the seal at 20 defines the other "extreme" position. Applicant chooses to word the definition of "recess" as the "width", e.g. the axial length between these two positions.

In Alfons the same structure produces the same results. Contact of the upper surface of the groove 17 in stem 10 with the seal 18 defines one "extreme" position. Contact of the lower surface of groove 17 of stem 10 with the seal 18 defines the other "extreme" positions. The axial length between these two contact points is read as the "width" of the "recess" as claimed.

Regarding applicants remarks concerning the above rejection under obviousness type double patenting, the argument that:

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"claim 11 covers pressure control devices for which "extreme positions are defined by the width of a circumferential recess in [a] valve." Claims 1-10 of van't Hoff do not include this limitation, and therefore claims 15-18 and 22-24 are patentably distinct from van't Hoff"

is not well taken given the claimed features of the device of claims 1-10 of U.S.

Pat. No. 6,616,017.

While it is agreed that the patented claims do not include, verbatim, in the exact words, the recitation concerning the "extreme positions (being) defined by the width of a circumferential recess" an understanding of the scope of the device of the patented claims reveals the gist covered by the recitation. For example, patented claim 1, lines 25-30 recites "the closing member (8) comprises a stem (24) which extends through a first opening (16) of the first chamber (4) wherein the first opening (16) is provided with a sealing ring (20) and the stem (24) is provided with a circumferential recess (22) where the sealing ring (20) extends in the recess (22)".

Lines 34-40 recites "the closing member (8) comprises a plunger (8) moveable in the axial direction of the cylinder (10) wherein the plunger (8) is located into the cylinder (10) and comprises the stem (24) which extends from the vessel (14) through the first opening (16) of the vessel (14) and the second opening (18) of the cylinder (10) to the cylinder (10)".

This, in concert with either one of claims 2 or 3 which recite "the closing member (8) is connected with the second chamber (6) so as to be movable between a first and second extreme position" within the context of the scope of the invention as disclosed therein, realizes the "width" dimension as is now recited. That is, although they are not

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identical, the broader scope of the invention as is now claimed is embraced by the more narrower scope of the patented claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Rivell whose telephone number is (571) 272-4918. The examiner can normally be reached on Mon.-Thur. from 6:30am-5:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on (571) 272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
**John Rivell**  
**Primary Examiner**  
**Art Unit 3753**

j.r.